

SEQUENCE LISTING

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<120> VIRAL VARIANTS AND USES THEREFOR

<130> 4420.000600

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<141> 2001-06-08

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<151> 2000-06-09

<160> 18

<170> PatentIn version 3.0

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Arg Xaa Pro Arg Thr Pro Xaa Arg Val Xaa Gly Gly Val Phe Leu Val
20 25 30

Asp Lys Asn Pro His Asn Thr Xaa Glu Ser Xaa Leu Xaa Val Asp Phe
35 40 45

Ser Gln Phe Ser Arg Gly Xaa Xaa Xaa Val Ser Trp Pro Lys Phe Ala
50 55 60

Val Pro Asn Leu Xaa Ser Leu Thr Asn Leu Leu Ser
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Ser Xaa Leu Ser Trp Leu Ser Leu Asp Val Ser Ala Ala Phe Tyr His
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Xaa Pro Leu His Pro Ala Ala Met Pro His Leu Leu Xaa Gly Ser Ser
 20 25 30

Gly Leu Xaa Arg Tyr Val Ala Arg Leu Ser Ser Xaa Ser Xaa Xaa Xaa
 35 40 45

Asn Xaa Gln Xaa Xaa Xaa Xaa Xaa Xaa Leu His Xaa Xaa Cys Ser Arg
 50 55 60

Xaa Leu Tyr Val Ser Leu Xaa Leu Leu Tyr Xaa Thr Xaa Gly Xaa Lys
 65 70 75 80

Leu His Leu Xaa Xaa His Pro Ile Xaa Leu Gly Phe Arg Lys Xaa Pro

Gly Val Gly Leu Ser Pro Phe Leu Leu Ala Gln Phe Thr Ser Ala Ile
 50 55 60

Cys Ser Val Val Arg Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr
 65 70 75 80

Met Asp Asp Val Val Leu Gly Ala Lys
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Phe Pro Ser Cys Cys Cys Thr Lys Pro Thr Asp Arg Asn Cys Thr Cys
 20 25 30

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Phe Pro Ser Cys Cys Cys Thr Lys Pro Thr Asp Gly Asn Cys Thr Cys
 20 25 30

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Asn Gln Tyr Gly Thr Met Gln Asn Leu His Asp Ser Cys Ser Arg Gln

1 5 10 15
 Leu Tyr Val Ser Leu Met Leu Leu Tyr Lys Thr Tyr Gly Trp Lys Leu
 20 25 30
 His Leu Tyr Ser His Pro Ile Val Leu Gly Phe Arg Lys Ile Pro Met
 35 40 45
 Gly Val Gly Leu Ser Pro Phe Leu Met Ala Gln Phe Thr Ser Ala Ile
 50 55 60
 Cys Ser Val Val Arg Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr
 65 70 75 80
 Met Asp Asp Val Val Leu Gly Ala Lys
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 Leu Tyr Val Ser Leu Met Leu Leu Tyr Lys Thr Tyr Gly Trp Lys Leu
 20 25 30
 His Leu Tyr Ser His Pro Ile Val Leu Gly Phe Arg Lys Ile Pro Met
 35 40 45
 Gly Val Gly Leu Ser Pro Phe Leu Leu Ala Gln Phe Thr Ser Ala Ile
 50 55 60
 Cys Ser Val Val Arg Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr
 65 70 75 80
 Val Asp Asp Val Val Leu Gly Ala Lys
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Leu Tyr Val Ser Leu Met Leu Leu Tyr Lys Thr Tyr Gly Trp Lys Leu
20 25 30

His Leu Tyr Ser His Pro Ile Val Leu Gly Phe Arg Lys Ile Pro Met
35 40 45

Gly Val Gly Leu Ser Pro Phe Leu Leu Ala Gln Phe Thr Ser Ala Ile
50 55 60

Cys Ser Val Val Arg Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr
65 70 75 80

Ile Asp Asp Val Val Leu Gly Ala Lys
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Phe Pro Ser Cys Cys Cys Thr Lys Pro Thr Asp Arg Asn Cys Thr Cys
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Leu Tyr Val Ser Leu Met Leu Leu Tyr Lys Thr Tyr Gly Trp Lys Leu
20 25 30

His Leu Tyr Ser His Pro Ile Val Leu Gly Phe Arg Lys Ile Pro Met
35 40 45

Gly Val Gly Leu Ser Pro Phe Leu Leu Ala Gln Phe Thr Ser Ala Ile
50 55 60

Cys Ser Val Val Arg Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr
 65 70 75 80

Ile Asp Asp Val Val Leu Gly Ala Lys
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Phe Pro Ser Cys Cys Cys Thr Lys Pro Thr Asp Gly Asn Cys Thr Cys
 20 25 30

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 1 5 10 15

Leu Tyr Val Ser Leu Met Leu Leu Tyr Lys Thr Tyr Gly Trp Lys Leu
 20 25 30

His Leu Tyr Ser His Pro Ile Val Leu Gly Phe Arg Lys Ile Pro Met
 35 40 45

Gly Val Gly Leu Ser Pro Phe Leu Leu Ala Gln Phe Thr Ser Ala Ile
 50 55 60

Cys Ser Val Val Arg Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr
 65 70 75 80

Ile Asp Asp Val Val Leu Gly Ala Lys
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Leu	Tyr	Val	Ser	Leu	Met	Leu	Leu	Tyr	Lys	Thr	Tyr	Gly	Trp	Lys	Leu
			20					25					30		
His	Leu	Tyr	Ser	His	Pro	Ile	Val	Leu	Gly	Phe	Arg	Lys	Ile	Pro	Met
			35				40					45			
Gly	Val	Gly	Leu	Ser	Pro	Phe	Leu	Met	Ala	Gln	Phe	Thr	Ser	Ala	Ile
	50					55					60				
Cys	Ser	Val	Val	Arg	Arg	Ala	Phe	Pro	His	Cys	Leu	Ala	Phe	Ser	Tyr
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Val	Asp	Asp	Val	Val	Leu	Gly	Ala	Lys							
					85										

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Leu Tyr Val Ser Leu Met Leu Leu Tyr Lys Thr Tyr Gly Trp Lys Leu
20 25 30

His Leu Tyr Ser His Pro Ile Val Leu Gly Phe Arg Lys Ile Pro Met
35 40 45

Gly Val Gly Leu Ser Pro Phe Leu Met Ala Gln Phe Thr Ser Ala Ile
50 55 60

Cys Ser Val Val Arg Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr
65 70 75 80

Val Asp Asp Val Val Leu Gly Ala Lys
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Phe Pro Ser Cys Cys Cys Thr Lys Pro Thr Asp Gly Asn Cys Thr Cys
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Leu Tyr Val Ser Leu Met Leu Leu Tyr Lys Thr Tyr Gly Trp Lys Leu
20 25 30

His Leu Tyr Ser His Pro Ile Val Leu Gly Phe Arg Lys Ile Pro Met
35 40 45

Gly Val Gly Leu Ser Pro Phe Leu Met Ala Gln Phe Thr Ser Ala Ile
50 55 60

Cys Ser Val Val Arg Arg Ala Phe Pro His Cys Leu Ala Phe Ser Tyr

65

70

75

80

Val Asp Asp Val Val Leu Gly Ala Lys
85